AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-16 (cancelled)

Claim 17 (new): A process for preparing melamine by thermally converting urea, wherein

a) the reaction of urea in a reactor to give melamine proceeds at least partly under reaction conditions under which at least one reactant, intermediate or end product is in a supercritical state, and

b) the mixture of at least one reactant, intermediate or end product forms a substantially homogeneous phase, and all reactants, intermediates or end products therein are fully dissolved.

Claim 18 (new): The process according to claim 17, wherein the reaction proceeds at least partly at a pressure above 550 bar, such as between 600 bar and 800 bar.

Claim 19 (new): The process according to claim 17, wherein the reaction proceeds at least partly at a temperature of at least 350°C, such as at 400°C.

Claim 20 (new): The process according to claim 17, wherein the reaction is carried out in a continuous tubular reactor.

Claim 21 (new): The process according to claim 20, wherein the tubular reactor is at least partly heated.

Claim 22 (new): The process according to claim 17, wherein urea is used as a liquid reactant.

Claim 23 (new): The process according to claim 17, wherein the reactant is brought to a required reaction pressure upstream of the reactor by a high-pressure pump.

Claim 24 (new): The process according to claim 17, wherein a reaction product of the reactor is decompressed to solidify the melamine in a decompression vessel having a pressure below 200 bar, such as atmospheric pressure.

Claim 25 (new): The process according to claim 24, wherein an offgas formed in the decompression vessel has at least the pressure of a urea synthesis so that it can be fed to a urea synthesis plant.

Claim 26 (new): The process according to claim 25, wherein the decompression vessel is heated.

Claim 27 (new): The process according to claim 26, wherein the reaction product is passed by a decompression apparatus, such as a valve for controlled decompression, before entry into the decompression vessel.

Claim 28 (new): The process according to claim 17, wherein a regulation apparatus for pressure regulation is present in the reactor.

Claim 29 (new): The process according to claim 27, wherein the regulation apparatus for the reactor pressure is coupled to the decompression apparatus.

Claim 30 (new): An apparatus for carrying out the process according to claim 17, wherein the reactor is a tubular reactor for supercritical reaction conditions.

Claim 31 (new): The apparatus according to claim 30, wherein the tubular reactor comprises a titanium alloy.

Claim 32 (new): The apparatus according to claim 30, wherein the reaction product is passed by a decompression apparatus for decompression of reaction products before entry into a decompression vessel.

Claim 33 (new): The process according to claim 18, wherein the reaction proceeds at least partly at a temperature of at least 350°C, such as at 400°C.

Claim 34 (new): The process according to claim 18, wherein the reaction is carried out in a continuous tubular reactor.

Claim 35 (new): The process according to claim 19, wherein the reaction is carried out in a continuous tubular reactor.

Claim 36 (new): The process according to claim 18, wherein the reactant is brought to a required reaction pressure upstream of the reactor by a high-pressure pump.

Claim 37 (new): The process according to claim 19, wherein the reactant is brought to a required reaction pressure upstream of the reactor by a high-pressure pump.